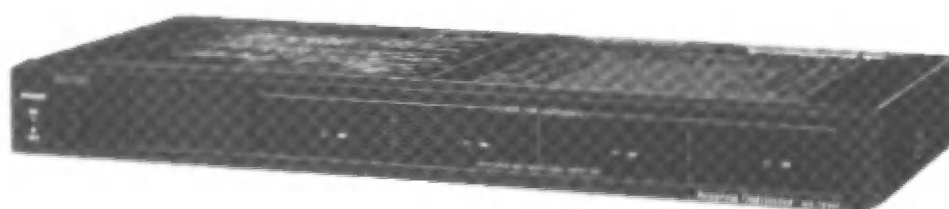


Operating Instructions

RAMSA

Antenna Distributor
WX-ZP490



Panasonic®

Before attempting to connect or operate this product, please read these instructions completely.

CONTENTS

READ THE FOLLOWING INSTRUCTIONS BEFORE USE	1
PREFACE	1
FEATURES	1
PRECAUTIONS	1
MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS	2
CONNECTIONS	3
WHOLE GAIN SWITCH AND ANTENNA GAIN SWITCH SETTING	5
STACKING	6
RACK MOUNTING	6
SPECIFICATIONS	7
ACCESSORIES	7



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

The serial number of this product may be found on the rear of the unit.

You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. _____

Serial No. _____

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

READ THE FOLLOWING INSTRUCTIONS BEFORE USE

Use of the Panasonic wireless devices is regulated by the Federal Communications Commission as described in Part 74 subpart H of the FCC regulations, and users authorized there by are required to obtain an appropriate license.

CAUTION:

It is a violation of Federal Law to begin operating this system prior to obtaining an FCC Radio License. The FCC ID number for this radio equipment is listed below.

FCC ID : ACK9TAWX-ZP490

PREFACE

The Antenna Distributor WX-ZP490 is designed to be used with the Diversity Receivers WX-RP401, WX-RP402, WX-RP404 and Wireless Antenna WX-ZP460 as a multi-channel diversity receiving system.

FEATURES

- The WX-ZP490 is an antenna distributor, which receives two inputs each at input terminals A and B, mixes the inputs, and distributes three outputs each from output terminals A and B.
- Each input terminals A and B can accept up to two antenna inputs from the optional Wireless Antenna WX-ZP460 and can distribute their inputs to the optional Diversity Receiver WX-RP401, WX-RP402, WX-RP404 each.
- The antenna sensitivity of two antennas each, A and B, can be remote-controlled by the distributor.
- The phantom power indicator is provided for the check of antenna connection.

PRECAUTIONS

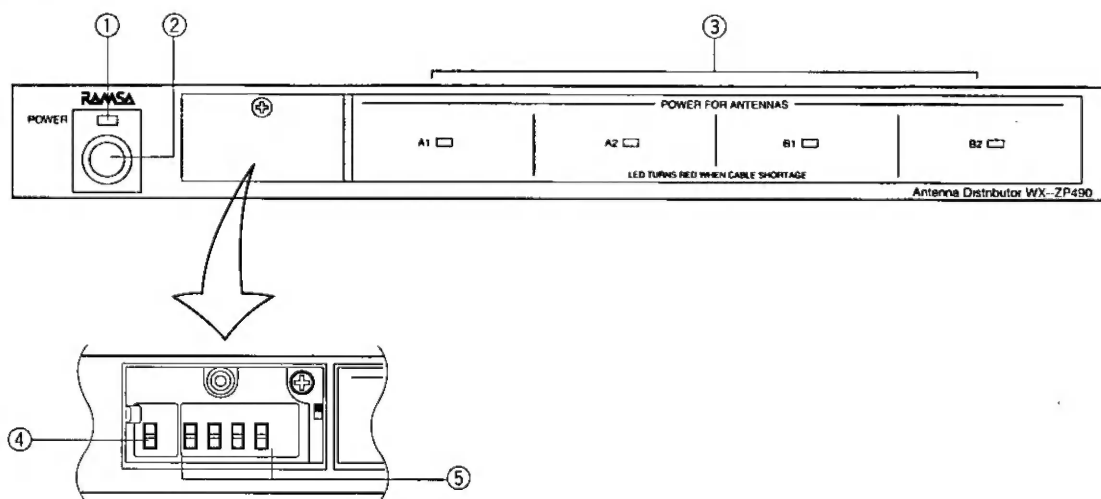
The UHF wireless communication system is a sensitive, high quality instrument and should be regarded as such. Because it is an electrical device, the hazard of electric shock exists, if it is used carelessly.

In order to utilize the instrument to its fullest potential, please consider the following points.

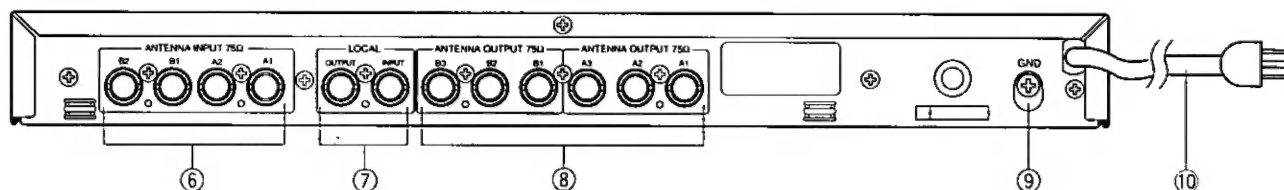
1. Handle the equipment with care.
Do not abuse the equipment. Avoid striking, shaking etc. This equipment contains sensitive components which could be damaged by improper handling or storage.
2. Refer any servicing to qualified service personnel.
Do not attempt to disassemble the unit. In order to prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside.
3. For cleaning the unit, wipe with dry cloth.
If necessary, use a damp cloth with a mild detergent. Do not use chemicals such as benzine, alcohol or thinner for cleaning.
4. Take immediate action if the distributor should become wet.
Turn the power OFF and consult with qualified service personnel. Moisture can damage the distributor and also create the danger of electric shock.
5. Place two receiving antennas between 16.7 ft (5m) and 66 ft (20m) apart from each other for the best diversity effect.
6. Do not place the receiving antenna in places affected by strong electrical or magnetic fields, such as near AC power lines, motors, transformers or generators. When operating the wireless system under these conditions, the wireless microphone and antennas should be between 6.7 ft (2m) and 33 ft (10m) apart from each other to avoid interference.
7. When using multiple wireless microphones, the transmitters should be at least 1.6 ft (50 cm) apart from each other.

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

■ Front Panel



■ Rear Panel



1. Power Indicator (Red)

2. Power On/Off Switch (POWER)

3. Phantom Power Indicators (POWER FOR ANTENNAS)

Show the condition of phantom power supply to each antenna input in color.

Green: Power supply normal

Red: Power supply abnormal

OFF: No power supply

Note: When this connector lights in red, be sure to disconnect the power plug and refer to the qualified service personnel.

4. Whole Gain Switch

Selects the sensitivity of whole antenna A and B.
(Antenna sensitivity is remote-controlled.)

5. Antenna Gain Switches

Select the antenna sensitivity of each antenna A or B.
(Antenna sensitivity is remote-controlled.)

6. Antenna Input Connectors (ANTENNA INPUT 75Ω)

75 ohms, 2 inputs each to antennas A and B, BNC connectors

[Phantom power supply is 12 VDC, 60 mA maximum]

Connect the output connector of wireless antenna to these connectors.

Caution: Do not connect a 75 ohms termination to Antenna Input Connector which is not in use.

7. Local Input/Output Connectors (LOCAL)

INPUT: Connect the local output of the optional Diversity Receiver WX-RP401, WX-RP402, or WX-RP404.

OUTPUT: Connect it to the local input of an other WX-ZP490 distributor, if increase the wireless antenna.

8. Antenna Output Connectors (ANTENNA OUTPUT 75Ω)

BNC connectors, 75 ohms, for 3 outputs each from antennas A and B

- Connect the optional Diversity Receiver WX-RP401, WX-RP402, or WX-RP404.

- Use BNC connectors for connection.

Note: Outputs will not be adversely affected even if a 75 ohms termination is not connected to Antenna Output Connectors which is not used.

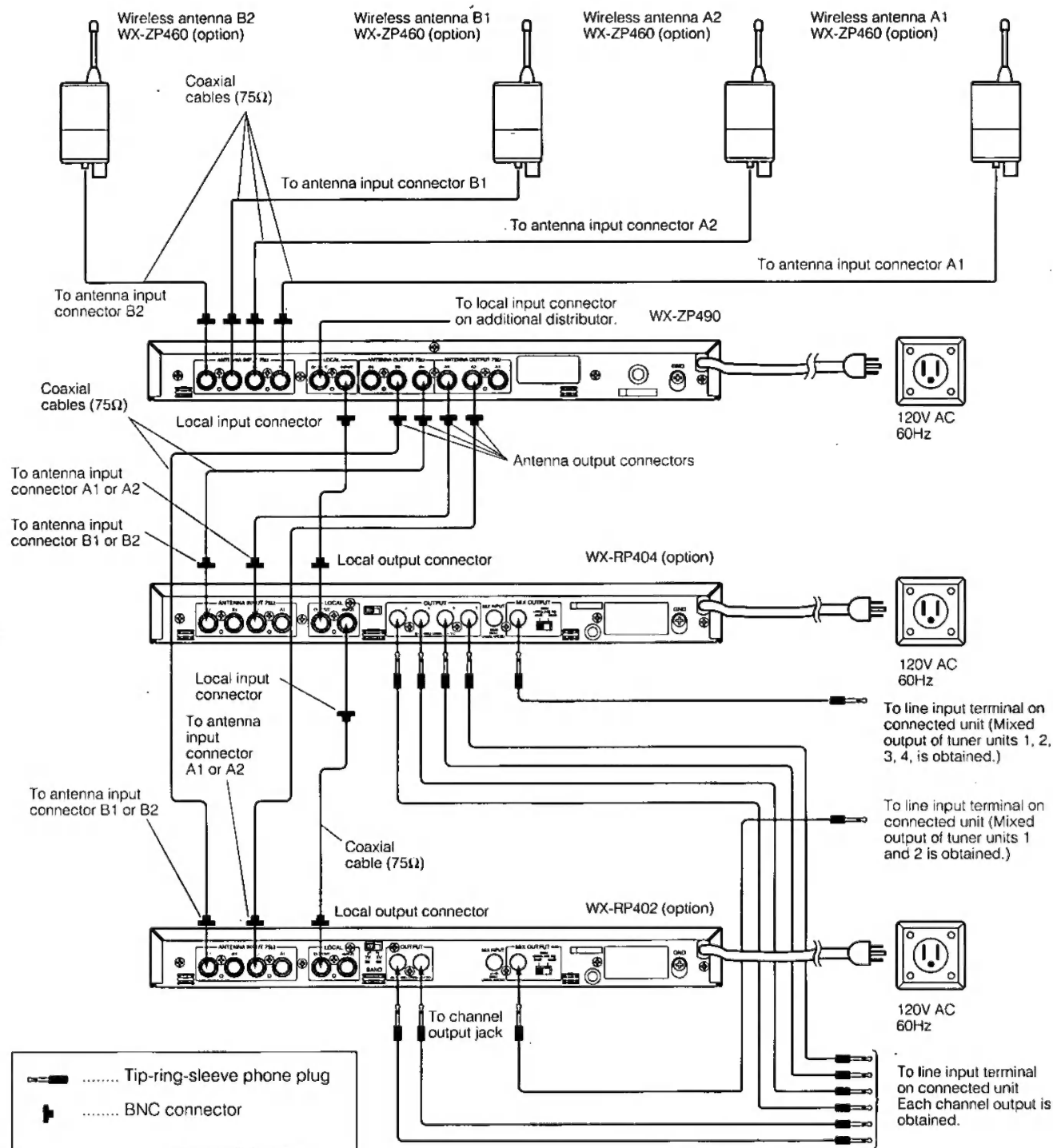
9. Ground Terminal (GND)

10. Power Cord (120 VAC, 60 Hz)

CONNECTION

■ 6-Channel Diversity Receiving (Example of Each Channel Output)

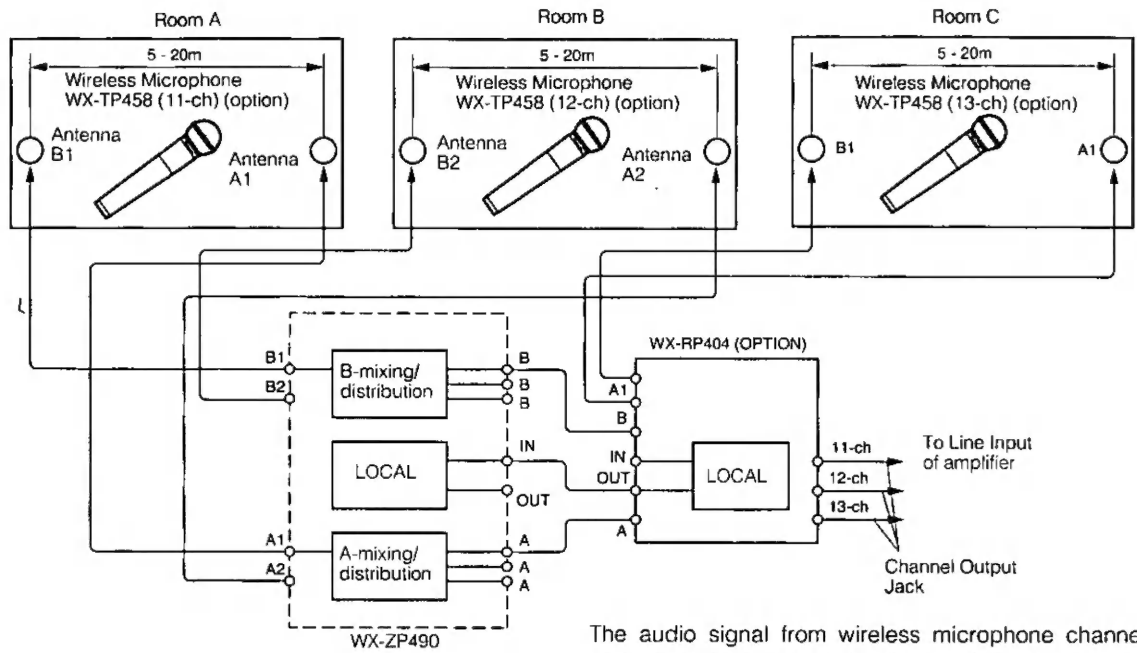
* A single Diversity Receiver WX-RP401 and WX-RP402 are used in the following system.



Cautions:

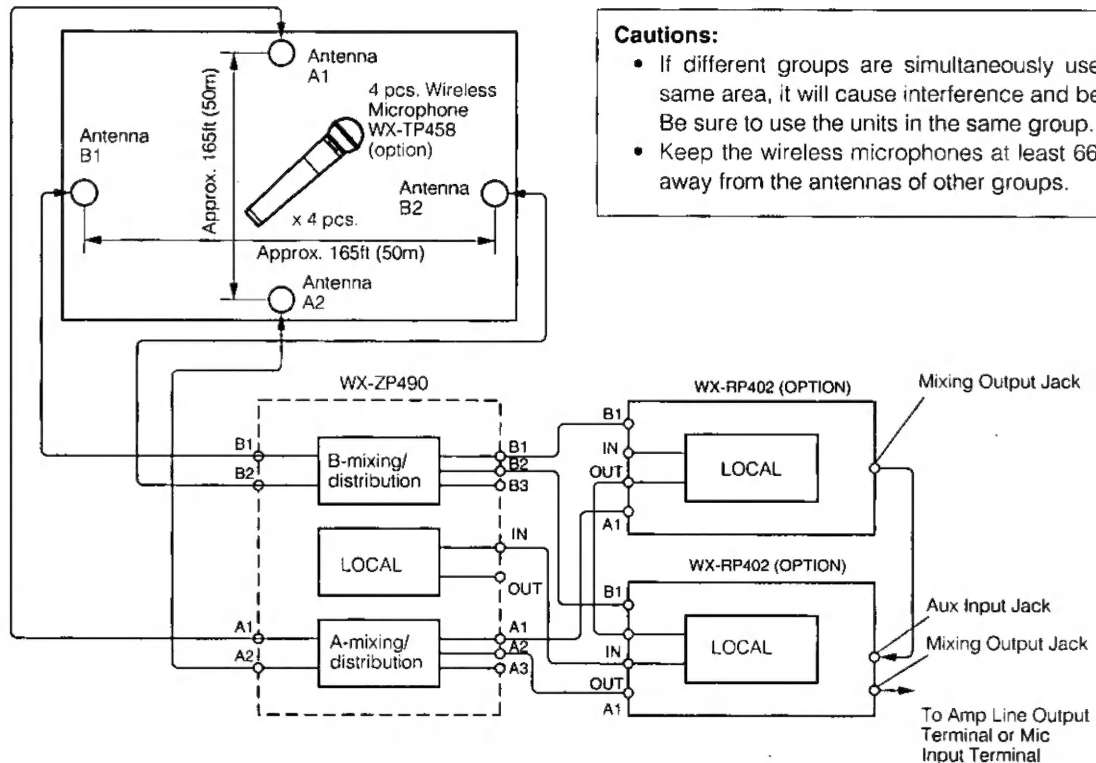
- Antenna sensitivity is remote-controlled by the Antenna Gain Switches or Whole Gain Switches on the receivers and distributor to which the antennas WX-ZP460s are directly connected.
- If the wireless antenna WX-ZP460 is connected to the antenna input, the remote control function for antenna sensitivity will not operate.
- The tuner units for the wireless receivers that receive signals distributed by a single WX-ZP490 distributor should be used in the same group. Mixed use with other groups will cause interference and beat.

■ Wireless Microphones System in Different Area (Example)



The audio signal from wireless microphone channels 11 and 12 can be received simultaneously in rooms A and B.

■ Use in a Large Area (Example)



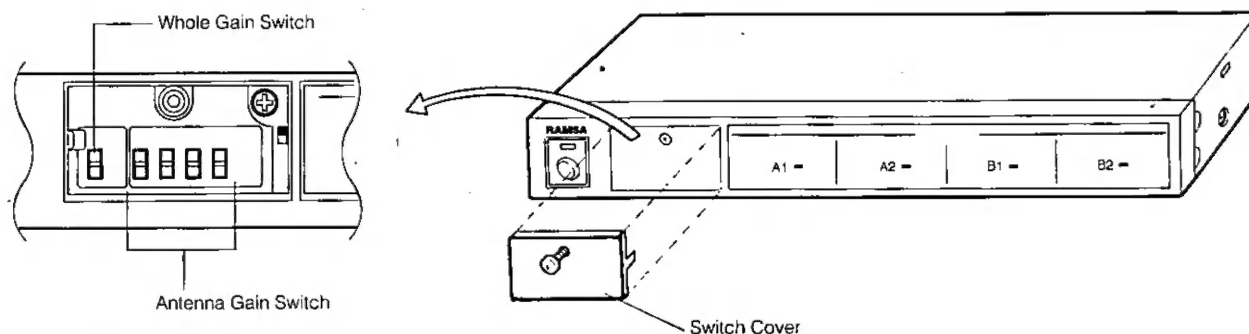
Cautions:

- If different groups are simultaneously used in the same area, it will cause interference and beat. Be sure to use the units in the same group.
- Keep the wireless microphones at least 66 ft (20m) away from the antennas of other groups.

WHOLE GAIN SWITCH AND ANTENNA GAIN SWITCH SETTING

- (1) Loosen the screws on the switch cover of the front panel and remove the switch cover.

The following illustration is WX-RP402.



- (2) Set the whole gain switch and antenna gain switch as shown in the table below.

Operating area (examples)			School ground	Gymnasium	Classroom	Conference room	Banquet room
Operable range (Distance from antenna to microphone)			100m 15m	30m 3m	20m 2m	15m 2m	20m 2m
Coaxial cable less than 30 m	Whole Gain Switch	+10	●				
		Nominal		●		●	●
		-10			●		
	Antenna Gain Switch	+6					
		Nominal	●	●	●		
		-6				●	●
	Recommended coaxial cable		RG-6/U	RG-6/U	RG-6/U	RG-6/U	RG-6/U
Coaxial cable less than 80 m	Whole Gain Switch	+10	●				
		Nominal		●		●	●
		-10			●		
	Antenna Gain Switch	+6	●	●	●		
		Nominal				●	●
		-6					
	Recommended coaxial cable		RG-6/U	RG-6/U	RG-6/U	RG-6/U	RG-6/U

- If dead point frequently occur in an actual operation test, raise the antenna gain switch by one position.
(Example: from -6 to NOMINAL)
If the antenna gain switch is already at the +6 position and cannot be shifted any higher, raise the whole gain switch by one position and adjust the antenna gain switch.

- (3) Remount the switch cover.

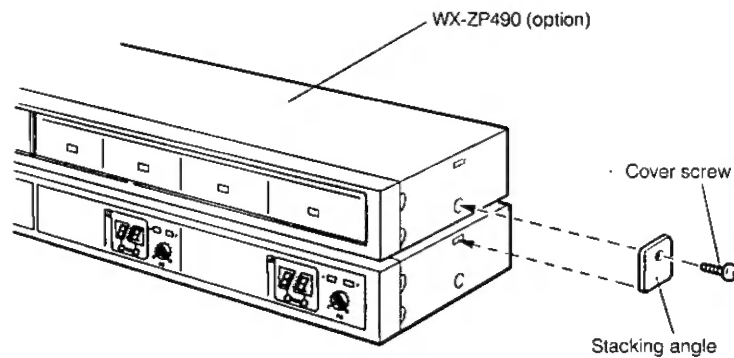
Note:

Antenna sensitivity can be remote-controlled with the Antenna Gain and Whole Gain Switches on the receiver or distributor to which the antenna (WX-ZP460) is directly connected.

STACKING

The following illustration is the WX-RP402 and WX-ZP490.

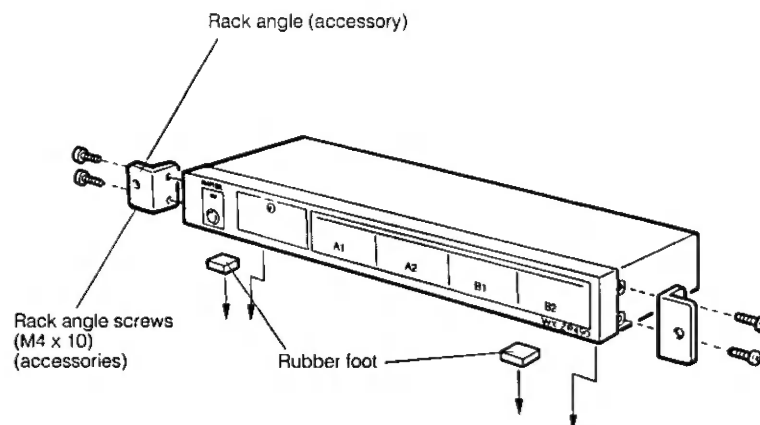
1. Remove the cover screws (M4 x 10) on both sides of the distributor.
2. Mount the WX-ZP490 on the Diversity Receiver WX-RP401, WX-RP402 or WX-RP404.
3. Secure these units with the stacking angle (provided) by using the screws removed above.



RACK MOUNTING

EIA 19-inch Rack Mounting

- Remove the four rubber feet.
- Fasten the rack angles with the supplied screws.
- Mount it in the rack.



Cautions:

1. Keep 1-unit or more space for both the top and bottom of the unit or install a cooling fan to keep the temperature within 50°C.
2. Secure the rear of the unit to the rack by using the additional holding angles (locally purchase) when vibration is preset.

SPECIFICATIONS

Power Supply:	120 VAC, 60 Hz
Power Consumption:	Approx. 8 W
Distribution Performance:	2 inputs each at terminals A and B, 3 outputs each from terminals A and B
Pass Frequency Band:	797 to 803 MHz (with wireless antenna WX-ZP460)
Pass Loss:	0 dB
Antenna Input Connector:	75 ohms, 2 inputs each to A and B, BNC connector [Phantom power output: 12 VDC, 60 mA maximum] [Local output: 45 MHz band]
Antenna Output Connector:	75 ohms, 3 outputs each from A and B, BNC connector
Local Input Connector:	75 ohms, BNC connector, 45 MHz band
Local Output Connector:	75 ohms, BNC connector, 45 MHz band
Ambient Operating Temperature:	14°F to 122°F (–10°C to +50°C)
Dimensions:	16-1/2" (W) x 1-3/4" (H) x 6-15/16" (D) [420 (W) x 44 (H) x 175 (D) mm] (Height without rubber feet; depth without knobs, connectors)
Weight:	4.6 lbs. (2.1 kg)

Weights and dimensions indicated are approximate.
Specifications are subject to change without notice.

ACCESSORIES

Rack Angle Fixing Screw (M4 x 10)	4 pcs.
Stacking Angle	2 pcs.
Rack Angle	2 pcs.

Panasonic

Broadcast & Television Systems Company

Division of Matsushita Electric Corporation of America

RAMSA/Professional Audio Systems

Executive Office: One Panasonic Way, Secaucus, New Jersey 07094
6550 Katella Ave. 17A-7, Cypress, CA 90630 (714) 373-7277

MATSUSHITA ELECTRIC OF CANADA LIMITED

5770 Ambler Drive, Mississauga, Ontario, L4W 2T3 Canada (905) 624-5010

PANASONIC SALES COMPANY

DIVISION OF MATSUSHITA ELECTRIC OF PUERTO RICO, INC.

San Gabriel Industrial Park, 65th Infantry Ave. KM. 9.5 Carolina, Puerto Rico 00630 (809) 750-4300